

## **REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed April 11, 2005. Upon entry of the amendments in this response, claims 1 – 4, 6 – 35 remain pending. In particular, Applicants amend claims 1, 6, 12, 16, 20, 27, 30, 31, and 32 and cancel claim 5. Applicants cancel this claim merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants do not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested. Reconsideration and allowance of the application and presently pending claims are respectfully requested

### **I. Allowable Subject Matter**

The Office Action indicates that claims 7 – 8 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Applicants appreciate Examiner Phunkulh's indication of allowable subject matter. Applicants amend claim 1, and submit that for at least the reason that independent claim 1 is allowable, dependent claims 7 and 8 are also allowable. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

In addition, the Office Action further indicates that claims 12 – 32 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph. Again, Applicants appreciate Examiner Phunkulh's indication of allowable subject matter and amend claims 6, 12, 16, 20, 27, 30, 31, and 32 as discussed below. Applicants submit that these

amendments fully comply with 35 U.S.C. 112, 2<sup>nd</sup> paragraph. For at least this reason Applicants submit that claims 12 – 32, as amended are allowable.

## **II. Claim Objections**

The Office Action indicates that claim 6 is objected to because of a missing period (“.”). Applicants amend claim 6 pursuant to the Office Action’s request and submit that claim 6, as amended is in condition for allowance. Applicants submit that this amendment is merely cosmetic in nature and should not be construed to raise prosecution history estoppel.

## **III. Rejections Under 35 U.S.C. §112**

The Office Action indicates that claims 6 – 32 stand rejected under 35 U.S.C. §112, 2<sup>nd</sup> paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In response to the Office Action’s request, Applicants amend claims 6, 12, 16, 20, 27, 30, 31, and 32 by changing the verbiage in these claims to now read “bandwidth availability and a user-specific predetermined maximum bandwidth allocation value.” Applicants submit that these amendments fully comply with 35 U.S.C. §112, and further submit that these claims are now in condition for allowance.

## **IV. Rejections Under 35 U.S.C. §102**

A proper rejection of a claim under 35 U.S.C. §102 requires that a single cited art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983).

**A. Claim 1 is Patentable Over Jang**

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. patent number 6,175,554 to Jang (“Jang”). Applicants respectfully traverse this rejection on the grounds that *Jang* does not disclose, teach, or suggest all of the claimed elements. Claim 1, as amended recites:

A computerized method of allocating among a plurality of users bandwidth for conveying information across a shared communications medium, comprising the steps of:

(a) receiving data representative of past bandwidth of each user during a time interval;

(b) forecasting future bandwidth of each user over a future time interval based on the data representative of the past bandwidth;

(c) ***prioritizing users based on each user's forecasted future bandwidth in increasing order, whereby a user with a lesser forecasted bandwidth receives a higher priority than a user with a greater forecasted bandwidth;*** and

(d) allocating bandwidth to each user sequentially in decreasing order of user priority.

Applicants submit that *Jang* fails to disclose, teach, or suggest a “computerized method of allocating among a plurality of users bandwidth for conveying information across a shared communications medium, comprising the steps of... ***prioritizing users based on each user's forecasted future bandwidth in increasing order, whereby a user with a lesser forecasted bandwidth receives a higher priority than a user with a greater forecasted bandwidth...***” as recited in claim 1, as amended. Applicants note that this amendment incorporates at least a portion of dependent claim 5. With respect to claim 5, the Office Action states:

Regarding claim 5, *Jang* discloses users are prioritized based on each user's forecasted future bandwidth consumption in increasing order, whereby a user with a lesser forecasted bandwidth consumption receives a higher priority than a user with a greater forecasted bandwidth consumption (a traffic flow rate controller (TFRC) of an expert system for calculating an optimal flow rate of each traffic source to control the

congestion of the output buffer, by using service rates of the traffic sources, traffic (QoS), peak bit rates, predicted traffic values, and the number of cells which cannot be processed in the output buffer, see col. 3 lines 13 – 29 and the QoS defines the priority of users, see col. 7 lines 67 to col. 8 line 3).

Applicants respectfully disagree with this analysis. Nowhere in *Jang* is there any mention of “*prioritizing users based on each user's forecasted future bandwidth in increasing order, whereby a user with a lesser forecasted bandwidth receives a higher priority than a user with a greater forecasted bandwidth...*” as recited in claim 1, as amended. Additionally, Applicants refer to the Office Action’s cited verbiage from *Jang*, column 8, beginning line 5, which states “[i]f decision gate 22 is at an on-state, the TFRC 23, first, decreases the flow rate *in the order of a service rate* of each traffic source...” However, *Jang* states, in column 5, line 54 “[t]he TFRC 23, which is an expert system receives the QoS, peak bit rates PBRs, traffic types, *service rates*  $SR((t)_1, \dots SR(t)_M)$ , traffic types, the *predicted traffic values*  $N(t+1)_1 \dots N(t+1)_M$  generated from the NNTPs 22-1... 21-m and the number  $NC(t+1)$  generated from the decision gate 22...” Further, in column 6, line 31, *Jang* states “The NNTP can predict the future traffic values by using the past traffic values.”

As clearly illustrated in these excerpts, service rates are distinct from predicted traffic values. Consequently, “decreas[ing] the flow rate *in the order of a service rate* of each traffic source” as stated in *Jang*, cannot anticipate a “computerized method of allocating among a plurality of users bandwidth for conveying information across a shared communications medium, comprising the steps of... *prioritizing users based on each user's forecasted future bandwidth in increasing order, whereby a user with a lesser forecasted bandwidth receives a higher*

*priority than a user with a greater forecasted bandwidth...*” as recited in claim 1, as amended.

For at least these reasons, claim 1, as amended is patentable over *Jang*.

**B. Claims 2 – 6 and 9 – 11 are Patentable Over *Jang***

In addition, dependent claims 2 – 6 and 9 – 11 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1. *In re Fine, Minnesota Mining and Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

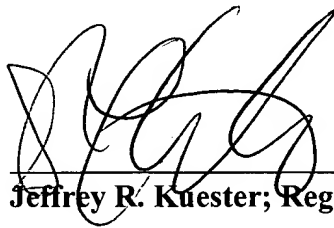
## CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1 – 4, 6 – 35 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

In addition, any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. Any and all findings of inherency are traversed as not having been shown to be necessarily present. Further, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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